Should I Stay or Should I Go?

The Association between Upward Socio-Economic Neighbourhood Change and Moving Propensities

Previous research on gentrification almost exclusively focussed on either the gentrifiers or those who are displaced. Those who manage to avoid displacement remain understudied. To shed new light on these original inhabitants, we link upward change in low-income neighbourhoods, measured by the changing socio-economic composition of the neighbourhood, to the propensity to move based on dissatisfaction with the neighbourhood or the home of both lower or middle-educated people and higher-educated people living in these neighbourhoods. We perform binary logistic multi-level analyses on the Liveability Monitor of Ghent (N=1,037), a midsized city in Belgium. We find that upward neighbourhood change is associated with a higher propensity to move based on dissatisfaction with the home for both the lower and higher-educated original inhabitants. Focusing on dissatisfaction with the neighbourhood, we find no association between moving propensities and the neighbourhood someone lives in. We therefore conclude that it is not the evaluation of the neighbourhood but the evaluation of one's own house in an improving neighbourhood that is associated with higher moving propensities, for both higher and lower educated respondents. Displacement pressures based on rising housing prices might lead to these moving propensities but it seems likely that there are other factors at play too, like e.g. life cycle mobility. We therefore also conclude that both lower and higher-educated inhabitants of improving neighbourhoods deserve academic attention.

Key words: Moving propensities, upward neighbourhood change, low-income neighbourhoods, Ghent, social inequalities

Introduction

In their decision about where to live, people not only have to choose a dwelling that accommodates their needs, but also have to find a neighbourhood that fits their preferences (Clark and Dieleman, 1996). Neighbourhood characteristics like neighbourhood quality and safety, the amenities provided in the neighbourhood and the reputation, the location and the demographic composition of the neighbourhood are all factors people take into account when deciding whether and where to they want to move (Clark and Coulter, 2015). Living in a neighbourhood that fails to provide certain attributes can cause residential stress and makes inhabitants leave, or at least aspire to do so (Brummell, 1981; Feijten and van Ham, 2009). Demographic neighbourhood changes have been linked to residential mobility: increases of the number of ethnic minorities or people with a lower socio-economic status have been found to be associated with an increase of out-movers (Clark and Coulter, 2015; Feijten and van Ham, 2009; Frey, 1979; Harris, 1999; van Ham and Clark, 2009).

Most scholars consider upward, socio-economic neighbourhood change through the lens of gentrification (Owens, 2012). Gentrification involves socio-economic upward change in low-income neighbourhoods[1] through migration and the (re)investment of capital in the neighbourhood, resulting in an upgrading of the physical environment and the partial or complete displacement of the original inhabitants (Atkinson, 2004; Lees, Slater and Wyly, 2008). Displacement, termed '*the most unjust aspect of gentrification*' by Davidson (2008, p.2386), has been thoroughly documented in the gentrification literature (e.g.: Atkinson, 2002; Podagrosi, Vojnovic, and Pigozzi,

2011; Shaw and Hagemans, 2015; Smith, 1996; Van Criekingen, 2008; Walks and Maaranen, 2008). However, not all definitions of gentrification mention displacement (Hackworth, 2002; Lyons, 1996) and there are several studies empirically contradicting this inherent link between gentrification and displacement (e.g.: Freeman and Braconi, 2004; Hamnett, 2003; Hochstenbach, Musterd and Teenstra, 2015; Kearns and Mason, 2013; McKinnish, Walsh and White, 2010; Vigdor, 2001).

These findings raise questions about the consequences of gentrification for those original inhabitants of gentrifying neighbourhoods who manage to remain in their neighbourhood. These people can still experience displacement pressures (Marcuse, 1986) when the original inhabitants of gentrifying neighbourhoods feel pressured to leave due to the changes in their neighbourhood. Social displacement elaborates on these pressures and describes the loss of a sense of place or familiarity with the neighbourhood due to gentrification. However, those who "live through gentrification" remain understudied (Doucet, 2009; 2014). The few studies focusing on these remaining inhabitants often find that these inhabitants experience displacement pressures or social displacement but at the same time also welcome some or many of the changes taking place in their neighbourhood (Doucet, 2009; Ernst and Doucet, 2014; Shaw and Hageman, 2015; Valli, 2016). Other studies find general appreciation for gentrification in Portland, Oregon (Sullivan, 2007) or ethnic differences in the opposition against and appreciation for retail gentrification in the same city (Sullivan and Shaw, 2011).

This study wants to further develop the knowledge about those who remain in gentrifying neighbourhoods and will therefore focus on the propensity to move of these non-gentrifier, non-displaced inhabitants of socio-economically improving

neighbourhoods. This should shed new light on this understudied group and could even offer the benefit that it might allow to uncover forced stayers, those who may want to move but are unable to do so. We will theoretically link socio-economic neighbourhood changes to residential stress and dissatisfaction theories (Brummell, 1981; Speare, 1974). The propensity to move is then considered to be a strong expression of experienced residential stress and dissatisfaction, as done by Feijten and van Ham, (2009) or Phipps and Carter (1984). Although this propensity is strongly related to actual moving behaviour (Coulter, van Ham and Feijten, 2011), it offers benefits over studying actual moving behaviour: it is less dependent on practical constraints associated with the stress and costs to move or the local housing market (Lu, 1999) which makes it possible to explicitly test sentiments instead of the necessity or possiblity to move. As the propensity to move offers both a measure of dissatisfaction and a predictor of actual moving decisions, and thus displacement, we hope our findings will offer insights in the relation between gentrification and displacement for those residents who, at least initially, manage to stay put.

Literature review

Residential dissatisfaction 'can result from a change in the needs of a household, a change in the social and physical amenities offered by a particular location, or a change in the standards used to evaluate these factors' (Speare, 1974: 175). The bonds people have with their neighbours and the attachment they feel to their residence also help to determine residential satisfaction (Burie, 1972). In addition, residential stress arises when households feel that their residential needs are not satisfied enough and believe that these needs would be better satisfied elsewhere (Brummell, 1981; Clark and Cadwaller, 1973; Hartig, Johansson and Kylin, 2003). Moving is often found to be

one way in which households try to deal with this stress and dissatisfaction (Hartig et al., 2003; Priemus, 1986). Increasing levels of residential stress and dissatisfaction are therefore found to be associated with both moving decisions and the propensity to move (Coulter et al., 2011; Phipps and Carter, 1984).

The demographic neighbourhood composition is one of the characteristics people take into consideration when deciding where to live. Low-income neighbourhoods, i.e. neighbourhoods having many inhabitants with a lower socio-economic status, are avoided as people associate these neighbourhoods with social problems, a bad reputation and socially unacceptable norms and values (Harris, 1999). As these neighbourhoods are less capable to provide certain amenities, the inhabitants of these neighbourhoods are more likely to be dissatisfied and experience residential stress and are therefore more likely to move and want to move out (Clark and Coulter, 2015; Feijten and van Ham, 2009; Skifter Andersen, 2008; van Ham and Clark, 2009). Moreover, people associate downward change, i.e. an increase in the number of inhabitants with a lower socio-economic status, with more social problems in their neighbourhood and a reputation that will go downhill (Harris, 1999). Downward change is therefore associated with dissatisfaction, residential stress and an increase in the number of people who want to move out (Clark and Coulter, 2015; Feijten and van Ham, 2009; van Ham and Clark, 2009).

It could be that *upward* neighbourhood change is met by indifference when these changes are only minimal, when inhabitants of deprived neighbourhoods have more pressing concerns, like the further ethnic diversification of their neighbourhood (e.g. see Martin, 2005), or when they are dissatisfied with the pace of the changes or find them insufficient (Kleinhans, 2009). For Ghent, a study investigating the reasons

why people move to and from Ghent has already shown that the households leaving the city do so mostly when they want to buy an affordable, more spacious and qualitative house and pay less attention to their neighbourhood, with the exception of nuisances, a lack of green space nearby and an overall disdain to raise children in the city (Stad Gent, 2016).

However, significant upward neighbourhood change will likely bring an improving reputation and an increase of neighbours that are considered more desired. It could also lead to a short increase (Mele, 1996; 2000) but eventual decrease of social problems (Barton and Gruner, 2016; Boggess and Hipp, 2016). All this could make people feel less ashamed of where they live as their neighbourhood is no longer seen as deteriorated and dangerous thanks to the upward change (Permentier, Bolt and van Ham, 2011; Permentier, van Ham and Bolt, 2007). Moreover, inhabitants with a higher socio-economic status are often better capable to draw attention to the problems in their neighbourhood and attract neighbourhood investments (Freeman, 2008; van Weesep, 1994; van Weesep and Musterd, 1991), shops and other amenities (Aalbers, 2011; Doucet, 2009; Doucet, van Kempen and van Weesep, 2011). When these upward changes are appreciated, they will likely be linked to more, neighbourhood-related, residential satisfaction and a lower propensity to move.

In addition, upward neighbourhood change can also be caused by incumbent upgrading rather than gentrification (Holcomb and Beauregard, 1981). This occurs when it are not in-movers with a higher socio-economic status who initiate the neighbourhood changes but original inhabitants who invest money – either private or public subsidies – and effort in the renovation of their own house. As there are little to no higher class in-movers, this form of upgrading can avoid the negative consequences

often found to be associated with gentrification. Moreover, incumbent upgrading often happens in deteriorating but still stable and attractive neighbourhoods (Holcomb and Beauregard, 1981). We therefore hypothesize that:

H1a: inhabitants of improving neighbourhoods are less inclined to move out based on dissatisfaction with the neighbourhood than inhabitants of non-improving, low-income *neighbourhoods. This holds for both inhabitants with a lower socio-economic status and inhabitants with a higher socio-economic status.*

However, the influx of middle class people often leads to several changes in the neighbourhood as these middle class in-movers attract new amenities suited to their needs, often at the expense of original amenities catering to the needs of the original inhabitants with a lower socio-economic status (Zukin et al., 2009) or because the new inhabitants impose their own, more middle class, norms and values in the neighbourhood (Doucet, 2009; Tissot, 2011) which can lead to conflict and friction in the neighbourhood (Mele, 1996; 2000). In addition, gentrification-related displacement often damages the local social networks (Livingston, Bailey and Kearns, 2010; van Kempen and Bolt, 2009). Furthermore, the friction and conflict between newer and older inhabitants associated with social mixing is related to decreasing levels of social cohesion (Atkinson, 2004; Livingston et al.2010; van Kempen and Bolt, 2009). All these changes can lead to social displacement and a ‘not for us’-sentiment among the lower class inhabitants (Davidson, 2008; Doucet, 2009; Shaw and Hagemans, 2015; Valli, 2016). The original inhabitants with a lower socio-economic status can therefore be assumed to be more likely to be dissatisfied with their neighbourhood and therefore wanting to leave. We therefore formulate the alternative hypothesis that:

H1b: inhabitants of improving neighbourhoods with a lower socio-economic status are more inclined to move out of improving neighbourhoods based on dissatisfaction with the neighbourhood than their socio-economic peers in low-income neighbourhoods.

Apart from changes in the neighbourhood, dissatisfaction with the home could also lead to reasons to leave. Firstly because many inhabitants – with a lower socio-economic status – of gentrifying neighbourhoods get directly displaced when they are no longer able to pay the increasing rental housing prices or because their landlords can make more money by renting to other, more-resourceful, renters (Atkinson, 2004; Lees, 2008). These rising housing prices can later displace other inhabitants with a lower socio-economic status who lived through gentrification too. But the home could lead to dissatisfaction even without rising prices: relative deprivation offers an additional reason why inhabitants with a lower socio-economic status might become dissatisfied after the influx of higher status neighbours. Relative deprivation states that people judge their own situation in comparison to that of others (Stouffer, Lumsdaine and Lumsdaine, 1949): what people believe they need is dependent on what others have (Frank 1997). When the original inhabitants with a lower socio-economic status compare themselves to their new, better-off, neighbours, they will be less satisfied with their own situation (Firebaugh and Schroeder, 2009; Luttmer, 2005) even though their objective housing situation did not change. This dissatisfaction will then be associated with higher moving propensities. As there are less, or even no, better-off in-movers in non-improving neighbourhoods, the relative situation of lower socio-economic status inhabitants of these neighbourhoods does not alter. We therefore hypothesize that:

H2: inhabitants of improving neighbourhoods with a lower socio-economic status are more inclined to move out of improving neighbourhoods based on dissatisfaction with their home than their socio-economic peers in low-income *neighbourhoods.*

The Belgian Context

Ghent is a midsized city in Belgium. The Belgian welfare policy can be assigned to the conservative, Christian democratic welfare state regime which is characterized by its embeddedness in the traditional societal organization with a corporatist-statist legacy and its focus on the traditional family (Andries, 1997; Esping-Andersen, 1990). However, contrary to certain other Christian democratic welfare states, the Belgium welfare state offers significant redistributional benefits and effectively tempers social inequality (Cantillon and Verbist, 1999). The Belgian housing policy is strongly focused on the individual acquisition of a home, preferably detached and found in a rural village. Of all people living in Belgium in 2011, 71.8% owned the house they live in, [2] while this percentage was 56% for Ghent.[3] The importance of homeownership is of such an extent that homeownership forms an important part of the Belgian welfare state and is considered as an alternative to the provision of social security (De Decker, 2008; Uitermark and Loopmans, 2013). Homeownership is promoted with tax reductions for the purchase of a first home, VAT reductions for home renovations and the provision of cheap/social loans. The consequences of this policy is a redistribution of the worse-off to the better-off and a nearly complete lack of private renting legislations or social housing (Heylen, 2013).

Data and methods

Data

We use the Liveability Monitor (Stad Gent, 2010, 2014), a cross-sectional survey used to collect information about the subjective well-being of the official inhabitants of Ghent.[4] This monitor was initiated in 2002 and has been conducted every three or four years since then. The data offer information about the respondents' moving propensities, housing and neighbourhood assessment, and sociodemographic characteristics. Only the last two rounds, collected in 2009 and 2013, can be used. Older rounds lack neighbourhood data. Respondents drawn from a stratified random sample of inhabitants of Ghent received the survey by mail and could either fill it out online or mail back their filled-in survey. Each respondent was offered the option of requesting a translated version. Thanks to extra efforts, the dataset is fairly representative for sex, place of residence, age and nationality and origin, although certain groups are still slightly underrepresented: people older than 65, men, and people of non-Western ancestry. Response rates were 36% in 2009 and 39% in 2013, resulting in 2,066 and 2,380 valid cases, respectively. All cases with missing values on the included variables were deleted.[5]

As we focus on people living through gentrification, only respondents who lived in their current neighbourhood longer than five years were included. Furthermore, as gentrification, with the exception of super-gentrification (Lees, 2003), only occurs in deprived neighbourhoods, we want to compare improving neighbourhoods with equivalent, non-improving neighbourhood. We thus only select low-income neighbourhoods. This filters out the association between a neighbourhood's socio-economic standing and the propensity to move of its' inhabitants.[6] We therefore only

selected the 1,037 respondents who resided in the top 33% most deprived neighbourhoods of Ghent.[7]

The Neighbourhood Monitor[8] and the Statistics Belgium websites[9] offer indicators about the socio-economic situation of neighbourhoods in Ghent. This contextual information can be used to measure the socio-economic upgrading of a neighbourhood. The demarcation of the statistical sectors is used to delineate neighbourhoods (Jamagne, Lebrun, and Sajotte, 2012). These strongly resemble the census tracts used in Anglo-Saxon research.

Variables

Dependent variable

Moving propensity. Two variables are computed as dichotomous variables with those who expect to move the coming two years because they are dissatisfied with either their neighbourhood – for the first dependent variable – or their dwelling – for the second one – classified as having moving propensities and all other respondents as not having moving propensities. This includes people who said they expect to move but for other reasons than dissatisfaction with the home or neighbourhood, for example due to work-related reasons or divorce.[10] This variable is based on the two questions presented in table 1. The classification is illustrated in column 2 of table 1.

[TABLE 1 AROUND HERE]

"Dissatisfaction with the current neighbourhood" is selected as one dependent variable as we investigate neighbourhood changes and this seems the most straightforward measure to do so. However, relative deprivation states that people judge their own situation in comparison to that of others (Stouffer et al., 1949). Better-off in-

movers will likely live in larger houses that they renovate. This could make original inhabitants less satisfied with their home. We therefore also include "Dissatisfaction with the current home". As inhabitants could be satisfied with either of the two but dissatisfied with the other, for example happy with the home but feeling socially displaced due to the changes in their neighbourhood or appreciating the changes in the neighbourhood but also relatively dissatisfied with their home, we will analyse both reasons separately.[11] This will also lead to more straightforward and less biased results.

Independent variables

Socio-economic upgrading. This is a dichotomous variable indicating whether a neighbourhood has improved socio-economically in the three years prior to the data collection of the Liveability Monitor. This was determined by constructing a deprivation index based on the median annual income and the percentage of unemployed inhabitants in the neighbourhood. This index expresses the extent to which neighbourhood socio-economic scores deviate from the average citywide socio-economic standing. Based on Freeman (2005, 2009), Van Criekingen (2008) and Van Criekingen and Decroly (2003), neighbourhoods are considered to be a low-income neighbourhood when they are among the 33% neighbourhoods scoring highest on the deprivation index at the start of the considered period (2006 or 2010). Improving low-income neighbourhoods are those low-income neighbourhoods that also belong to the 33% of neighbourhoods – city wide – with the strongest declining deprivation index during the investigated period (2006–2008 or 2010–2012).[7] The non-improving, low-income neighbourhoods are all other neighbourhoods, i.e. both the stable and declining low-income neighbourhoods.[12] The included neighbourhoods in Ghent are mapped in

Figure 1. The majority of these neighbourhoods can be found in the most deteriorated part of the city, the 19th century belt.

[FIGURE 1 AROUND HERE]

Table 2 shows the index of deprivation values for both improving and non-improving, low-income neighbourhoods, as well as the difference in those values between the start and finish of the two investigated periods (2006–2008 and 2010–2012). How these values relate to the median income and the percentage unemployed inhabitants is presented in Table 7 in Appendix A. Both improving and non-improving neighbourhoods are substantially deprived, with respective average deprivation scores of 1.63 and 1.54 for 2006 and 1.50 and 1.51 for 2010. These can be compared to a neutral score of 1. These deprivation scores declined in improving neighbourhoods by an average of 0.15 points for 2006 and 0.13 points for 2010. The deprivation scores of non-improving neighbourhoods increased slightly, by 0.07 for 2006 and 0.08 for 2010.

[TABLE 2 AROUND HERE]

Educational attainment.[13] Educational attainment is a categorical variable used to determine the socio-economic status of the respondent. Respondents are divided between those who did not attain a higher education degree and those who did. These categories are "lower or middle-educated" and "higher-educated", respectively.

Control variables[14]

We control for three background characteristics. *Presence of young children* is a dichotomous variable based on the presence of 0 to 6 year olds in the family. Families with 0 to 6 year old children belong to the first category, other families to the second. *Homeownership* is a categorical variable indicating whether or not the respondent is the

owner of the house or apartment he or she lives in. Those who indicated they own their home constitute the first category, all others the second. *Age* is a metric variable. It ranges from 10 years old to 80 years old. To account for the curvilinear association between age and residential decisions (Kim, Horner and Marans, 2005), *age squared* is also included. These control variables are all assumed to be related to residential mobility: people often move when they start forming a or expand their family; homeowners are believed to be more invested in their neighbourhoods and thus less inclined to move; and age is included as a proxy for life cycle transitions, which often initiate residential mobility (Clark and Dieleman, 1996; Coulter et al., 2011; Kim et al., 2005).

Table 3 presents all descriptive statistics. The individual level variables are cross-tabulated according to the type of neighbourhood a respondent lives in. The table is split in two columns, one referring to the dataset with the respondents who want to move because they are dissatisfied with their home and respondents without moving propensities[15] and the other with these same respondents without moving propensities and the respondents who want to move because they are dissatisfied with their neighbourhood.

[TABLE 3 AROUND HERE]

Methods

As individuals live in certain neighbourhoods and they are thus clustered within these neighbourhoods, it is necessary to conduct multi-level analyses. This technique allows to correctly measure the influences neighbourhood characteristics have on their inhabitants. Furthermore, given that the dependent variable, i.e. moving propensities, was constructed dichotomously, binary logistic multi-level models were estimated.

These models incorporated 1,037 respondents nested within the 55 most deprived of Ghent's 201 neighbourhoods.[7] We make extractions from this dataset for the two analyses, each time excluding those who said they expect to move because of the reason not analysed. The models were analysed using the lme4 R package (Bates et al., 2015). Chances are expressed in odds ratio's. Odds ratio's express the ratio between the odds of having moving propensities and those of not having it.

Three models and the so-called null model are presented for the two dependent variables. This null model (Hox, 2010) provides information on the variance in moving propensity between the neighbourhoods in Ghent. It measures the extent to which neighbourhood characteristics are important for the variance in respondents' moving propensities. The control variables offer a base measure in the first model. The second model examines the impact of educational attainment and living in a socio-economically upgrading neighbourhood on moving propensities. When relevant, the interaction between these two variables is added for the third model. This model was used to test the formulated hypotheses.

Results

Dissatisfaction with the neighbourhood

The left hand side of table 4 presents the results from bivariate analyses. On average, people with the propensity to move due to dissatisfaction with their neighbourhood are less educated and rented more often.

TABLE 4 AROUND HERE

TABLE 5 AROUND HERE (IN LANDSCAPE)

Table 5 presents the results of the four multi-level models. The neighbourhood variance in the null model amounts to 0.649 (SD: 0.809) which equals 16.48 percent of the total variance.[16] From model 1 it appears that there is no association between the presence of young children and the propensity to move (OR: 0.973, $p > .1$). The other two control variables, at the contrary, are in line with what can be found in the literature: Homeowners are less inclined to express moving intentions (OR: 0.587, $p < .05$) and moving propensities reach their peak at age 45 (OR for one standard deviation difference, first order: 1.041, $p > .1$; OR for one standard deviation difference, first order: 0.748, $p < .05$).

The second model shows the main effects of education and living in a socio-economically upgrading neighbourhood. Higher-educated respondents have a lower chance to express moving propensities than lower or middle-educated respondents (OR: 0.655, $p = .087$) but this association is only marginally significant. Respondents living in upgrading neighbourhoods are neither less nor more likely to express moving propensities than respondents living in non-upgrading, low-income neighbourhoods (OR: 1.096, $p > .1$). As neighbourhood improvements are not significantly related to moving propensities, the interaction between the two independent variables is not investigated. As there is no association between improvements and neighbourhood-related moving propensities, we have to reject our first and second hypothesis.

Dissatisfaction with the home

The right hand side column of table 4 presents the results from bivariate analyses. On average, people with the propensity to move because they are dissatisfied with their home are parents of young children and rented more often. They are also younger than people without moving propensities.

TABLE 4 AROUND HERE

TABLE 6 AROUND HERE (IN LANDSCAPE)

Table 6 presents the results of the four multi-level models. The neighbourhood variance in the null model amounts to 0.065 (SD: 0.255), which equals 1.94 percent of the total variance.[16] All associations between the control variables and the propensity to move in model 1 were in line with what can be found in the literature: homeowners are less inclined to express moving intentions (OR: 0.261, $p < .001$); moving propensities reach their peak at age 36 (OR for one standard deviation difference, first order: 0.647, $p < .01$; OR for one standard deviation difference, first order: 0.615, $p < .001$);and families with 0 to 6 year old children have a higher chance to express moving propensities than those without children between this age range (OR: 2.203, $p < .01$).

The second model shows the main effects of education and living in a socio-economically upgrading neighbourhood. Higher-educated respondents are neither more nor less likely to express moving propensities than lower or middle-educated respondents (OR: 0.767, $p > .1$). Respondents living in upgrading neighbourhoods are more likely to express moving propensities than respondents living in non-upgrading, low-income neighbourhoods (OR: 2.181, $p < .05$).

The interaction between socio-economic neighbourhood upgrading and education is added for model 3. The main effect for education now expresses the odds ratio between higher-educated respondents and lower or middle-educated respondents who live in non-upgrading neighbourhoods. This odds ratio decreased from 0.767 ($p > .1$) to 0.502 ($p < .1$) and is now only marginally significant. This means that, when accepting this association as significant, higher-educated inhabitants of non-improving

neighbourhoods are now about half as likely to express moving propensities than their lower or middle-educated neighbours. The main effect for socio-economic neighbourhood upgrading now expresses the odds ratio for expressing moving intentions between lower or middle-educated respondents who live in upgrading neighbourhoods and lower or middle-educated respondents who live in non-upgrading neighbourhoods. This odds ratio decreased from 2.181 ($p < .01$) to 1.705 ($p < .1$) and is now only marginally significant. This means that, when accepting this association as significant, inhabitants with a lower socio-economic status are now less likely to express moving propensities when they live in socio-economically upgrading neighbourhoods, compared to their socio-economic peers in non-upgrading neighbourhoods. The interaction, however, is not significant (OR: 1.991; $p > .1$). This means that there are no significant differences between lower or middle-educated respondents and higher-educated respondents: higher-educated inhabitants of improving neighbourhoods respond the same way the improvements of their neighbourhood as lower or middle-educated respondents.

Based on model 2, we accept our third hypothesis, lower or middle-educated respondents of improving neighbourhoods are more likely to express moving propensities than their socio-economic peers in non-improving neighbourhoods. However, contrary to what would be expected, the same finding holds for higher-educated respondents.

Discussion and Conclusion

Upward change in low-income neighbourhoods is standardly investigated through the lens of gentrification (Owens, 2012). This led to a predominant focus on

either the gentrifiers themselves or those who are displaced by gentrification. The original inhabitants of improving neighbourhoods who manage to, at least initially, stay put, however, are often ignored in the academic discussion (Doucet, 2009; 2014). We try to add to the knowledge about how this third group is affected by the improvements of their neighbourhood. We therefore try to link moving propensities to upward socio-economic neighbourhood change in low-income neighbourhoods.

Our results indicated that when focusing on moving propensities based on neighbourhood dissatisfaction, a relation between living in improving neighbourhoods and expressing moving propensities is lacking for both higher and lower educated respondents. We therefore have to reject our first hypothesis and its' alternative hypothesis: people living through the socio-economic improvements of their neighbourhoods are neither less nor more likely to express moving propensities based on dissatisfaction with the neighbourhood than people living in non-improving low-income neighbourhoods.

That neighbourhood improvements appear to be unrelated to neighbourhood-related moving propensities could be related to a number of reasons. A first explanation might be that the dissatisfied inhabitants have already left. Other explanations might be that these inhabitants are more concerned about the ethnic composition of the neighbourhood and therefore do not perceive the upward socio-economic changes of their neighbourhood as a problem, like Martin (2005) found in London, or that our results reflect the more mixed feelings of appreciation for these changes and social displacement Doucet (2009) found among lower educated inhabitants in Leith, Edinburgh. It could also be that these respondents are unconcerned with their neighbourhood, as it has been found that people who leave Ghent are not concerned

with their neighbourhood when deciding to move away (Stad Gent, 2016). A last explanation could be that we likely only deal with a mild form of gentrification, thus forestalling strong effects of gentrification.

Looking at moving propensities based on dissatisfaction with the home, we find that these are related to neighbourhood improvements for lower and middle-educated respondents. This confirms our third hypothesis and could point towards the displacing force of rising house prices for these respondents. However, the fact that both renters and homeowners respond in the same way to the improvements of their neighbourhood tempers the likeliness of displacement.[17] In addition, higher-educated inhabitants are also more likely to express higher moving propensities based on dissatisfaction with the home in improving neighbourhoods than in non-improving neighbourhoods. Moreover, moving propensities based on dissatisfaction with the home were significantly related to the presence of young children whereas the latter was not related to moving propensities based on dissatisfaction with the neighbourhood.

Based on these three additional results, it seems likely that there is a diverse group of people with higher moving propensities in improving neighbourhoods and that each has their own reasons to want to move. This is in line with what Van Criekingen found in Brussels (2009). Price increases and displacement can certainly be one of those reasons for lower educated people. Moreover, price increases could also motivate higher educated inhabitants to leave when higher educated renters have to pay more or when higher educated homeowners have access to greater financial possibilities thanks to rising prices and can therefore choose from a larger set of housing possibilities elsewhere.

But the function these neighbourhoods play for many of its inhabitants can matter too. Van Criekingen already showed in Brussels that many of the out-movers of improving neighbourhoods are so called marginal gentrifiers, young single headed or unmarried households in the transition to adulthood who moved in to these neighbourhoods when leaving the parental home but leave the city again when they start forming a family (2009). These people arrived in the neighbourhood while looking for cheaper housing close to the city center, but never intended to stay there. As both age and the presence of young children are also significantly related to the intention to leave due to dissatisfaction with the home, it seems possible that the same matters in Ghent: It could be that there are significantly more young couples and singles in the transition to adulthood in improving neighbourhoods who were never planning to remain in the neighbourhood after they start a family and therefore want to move.

However, it must be born in mind that we do not focus on actual displacement. As Belgium has a very deregulated housing market, lower-income inhabitants of improving neighbourhoods can easily be priced out of their homes and neighbourhoods. Nonetheless, it seems unlikely that this is the case because neighbourhood improvements are measured for the short period of three years prior to the data collection, other studies show that those who move, do not do so because of the upward socio-economic transition of their neighbourhood (Stad Gent, 2016), and it could be doubted that there is a massive, selective, outmigration of certain groups in Ghent as the socio-economically improving neighbourhoods in our study do not change as dramatically as often investigated cities like London or San Francisco. In addition the social inequality in Belgium is less severe than in Anglo-Saxon countries, which could also temper the consequences of neighbourhood upgrading.

The choice to investigate moving propensities has two consequences. First, people may want to move for several reasons. Although upward socio-economic change can make them more or less inclined to move, other factors - such as tendencies to avoid ethnic minority neighbours or to live with co-ethnics (Anonymous, working paper A & B) - may cause the same moving propensities (Feijten and van Ham, 2009). Second, the focus on moving propensities because of dissatisfaction offers only a one-sided view in which the opportunities created by neighbourhood change are ignored. These opportunities could also be linked to higher moving propensities, as discussed above.

Finally, the findings should be seen within the confines of the used data. First, the available data are not longitudinal. It is therefore not known what the direct effect of neighbourhood change is on the moving intentions of people living in improving neighbourhoods. This would require pre- and post-measurements in these neighbourhoods. Second, we now focussed on a short time period. Although there were certainly changes in this period, longer periods could offer more distinct changes and thus be related to different or more pronounced results. Third, we lack data on housing price increases. As displacement often operates through price increases, it would be informative to add this to our analyses. Fourth, *where* respondents want to move to was not considered. It is possible that respondents wanted to move to another improving neighbourhood. This could bias our results. Finally, it is impossible to distinguish between incumbent upgrading and gentrification with the measurement we adopted for the socio-economic upgrading of the neighbourhood (Holcomb and Beauregard, 1981).

Notwithstanding these limitations, our results indicate that alienation from the neighbourhood, termed social displacement by Doucet (2009), seems unlikely in Ghent as moving propensities based on dissatisfaction with the neighbourhood yielded no

significant results. However, caution is required against displacement due to rising housing prices as moving propensities based on dissatisfaction with the home were higher in improving neighbourhoods than in non-improving neighbourhoods for both higher and lower-educated respondents. That both educational groups respond in the same way indicates that there are likely other factors at play too, like the life cycle mobility of those inhabitants who consider these neighbourhoods as only a transitional place to live. This implies that both higher and lower-educated inhabitants who live through the gentrification of their neighbourhood deserve scientific attention.

Funding Statement

Details omitted for double blind reviewing. The authors declare they have no conflict of interest.

Notes

[1] The exception is super-gentrification (Lees, 2003) which occurs in already high-income neighbourhoods.

[2] This information is found on http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho02andlang=en.

[3] This information can be found on the Neighbourhood Monitor. This can be accessed at http://gent.buurtmonitor.be

[4] The vast majority of higher education students living in Ghent return home, i.e. to the parental house, during the weekend. As these students do not officially register in the city of Ghent, they are not considered to be official residents of Ghent and are therefore not included in the dataset.

[5] This left 4,126 of the 4,446 cases (92.8%). Many deleted cases had missing values on either educational attainment or on the dependent variable. The missing values for educational attainment are assumed random because these cases were equally divided between all socio-economic status groups based on their income.

[6] If higher-income neighbourhoods would be included, our results would show inhabitants of improving neighbourhoods more likely to express moving propensities but these results would be biased as they compare inhabitants of low-income but improving neighbourhoods to inhabitants of all other, but mostly higher-income, neighbourhoods.

[7] This was calculated after removing all 31 neighbourhoods with less than 50 inhabitants, leaving 170 neighbourhoods. There were 59 deprived neighbourhoods in total: 55 deprived in both 2006 and 2010, and 4 that were deprived in 2006 only or 2010 only. However, some neighbourhoods are not included in the multilevel analysis as these neighbourhoods lacked respondents in the Liveability Monitor. Twice 52 of the 57 deprived neighbourhoods were thus withheld. Of these deprived neighbourhoods, 49 were included for both periods, 3 were only included for the first wave and another 3 for the last wave. This results in a total of 55 neighbourhoods.

[8] This can be accessed at http://gent.buurtmonitor.be

[9] This can be accessed at http://statbel.fgov.be/nl/statistieken/cijfers/

[10] We performed sensitivity analyses comparing people who said they want to move for either of the two mentioned reasons with those who answered “No” on the first question but this did not influence our results. Results are available upon request.

[11] Like one of our reviewers suggested, the neighbourhood changes can also be related to the propensity to move because of reasons that are classified under “Personal

circumstances", "Other", e.g. when people can no longer afford the remain, or under "Work", e.g. when their jobs are displaced. We therefore performed sensitivity analyses comparing people who want to move with people who don't and analyzing the other three answer possibilities. None of these analyses offered significant effects of neighbourhood improvements on the propensity to move, with the exception of a marginally significant association when comparing those who answered "Other" to people who do not expect to move. Results are not shown but available upon request.

[12] We performed sensitivity analyses where we divide between improving, stable and declining low income neighbourhoods. This did not alter the results in a meaningful way. Results are available upon request.

[13] We performed sensitivity analyses using household income as the proxy for socio-economic status. This resulted in no association between neighbourhood improvements, income and the propensity to move. Results are available upon request.

[14] Sensitivity analyses with extra control variables were performed and did not substantially alter the results. These variables are: labour market participation, income, ethnicity (all on the individual level) and neighbourhood level turnover and percentage ethnic minority inhabitants (on the contextual level).

[15] Please note that this refers to all respondents without the intention to move or

References

Anonymous, working paper A.

Anonymous, working paper B.

Aalbers M. (2011) The Revanchist Renewal of Yesterday's City of Tomorrow. *Antipode* 43: 1696-1724.

Andries M. (1997). *De Belgische sociale zekerheid in de typologie van de welvaartsstaten*.

Atkinson R. (2002). Does gentrification help or harm urban neighbourhoods?: An assessment of the evidence-base in the context of the new urban agenda (CNR paper 5). *Urban Studies*.

Atkinson R. (2004) The Evidence of the Impact of Gentrification: New Lessons for the Urban Renaissance? *European Journal of Housing Policy.* 107-131.

Barton MS and Gruner CP. (2016). A Theoretical Explanation of the Influence of Gentrification on Neighborhood Crime. *Deviant Behavior* 37: 30-46. doi:10.1080/01639625.2014.983004

Bates D, Maechler M, Bolker B, Walker S. (2015). Fitting Linear Mixed-Effects Models Using lme4. *Journal of Statistical Software*, 67(1), 1-48.doi:10.18637/jss.v067.i01

Boggess LN and Hipp JR. (2016). The Spatial Dimensions *of* Gentrification and the Consequences for Neighborhood Crime. *Justice Quarterly* 33: 584-613. doi:10.1080/07418825.2014.943799

Brummell AC. (1981) A Method of Measuring Residential Stress. *Geographical Analysis* 13: 248-261.

Burie JB. (1972) *Wonen en Woongedrag - Verkenningen in de Sociologie van Bouwen en Wonen,* Boom (NL): Meppel.

Cantillon B and Verbist G. (1999). *De sociale en fiscale herverdeling in België*.

Clark WAV and Cadwaller M. (1973) Locational Stress and Residential Mobility. *Environment and Behavior* 5: 29-41.

Clark WAV and Coulter R. (2015) Who Wants to Move? The Role of Neighbourhood Change. *Environment and Planning A* 47: 2683-2709.

Clark WAV and Dieleman FM. (1996) *Households and Housing: Choice and Outcomes in the Housing Market,* New Brunswick, New Jersey: Center for Urban Policy Research.

Coulter R, van Ham M and Feijten P. (2011) A Longitudinal Analysis of Moving Desires, Expectations and Actual Moving Behaviour. *Environment and Planning A* 43: 2742-2760.

Davidson M. (2008). Spoiled Mixture: Where Does State-led `Positive' Gentrification End? *Urban Studies* 45: 2385-2405. doi:10.1177/0042098008097105

De Decker P. (2008). Facets of housing and housing policies in Belgium. *Journal of Housing and the Built Environment* 23: 155-171. doi:10.1007/s10901-008-9110-4

Doucet B. (2009). Living through Gentrification: Subjective Experiences of Local, Non-Gentrifying Residents in Leith, Edinburgh. *Journal of Housing and the Built Environment* 24: 299-315.

Doucet B. (2014). A Process of Change and a Changing Process: Introduction to the Special Issue on Contemporary Gentrification. *Tijdschrift Voor Economische en Sociale Geografie*, 105: 125-139. doi:10.1111/tesg.12075

Doucet B, van Kempen R and van Weesep J. (2011) Resident Perception of Flagship Waterfront Regeneration: The Case of the Kop van Zuid in Rotterdam. *Tijdschrift Voor Economische en Sociale Geografie* 102: 125-145.

Ernst O and Doucet B. (2014). A Window on the (Changing) Neighbourhood: The Role of Pubs in the Contested Spaces of Gentrification. *Tijdschrift Voor Economische en Sociale Geografie,* 105: 189-205. doi:10.1111/tesg.12071

Esping-Andersen G. (1990). *The Three Worlds of Welfare Capitalism*. Oxford: Polity Press.

Feijten P and van Ham M. (2009) Neighbourhood Change ... Reason to Leave? *Urban Studies* 46: 2103-2122.

Firebaugh G and Schroeder MB. (2009) Does Your Neighbor's Income Affect Your Happiness? *American Journal of Sociology* 115: 805-831.

Frank RH. (1997). The frame of reference as a public good. *Economic Journal* 107: 1832-1847. doi:10.1111/1468-0297.00261

Freeman, L. (2005). Displacement or Succession? Residential Mobility in Gentrifying Neighborhoods. *Urban Affairs Review,* 40: 463-491.

Freeman L. (2008) Comment on 'The Eviction of Critical Perspectives from Gentrification Research'. *International Journal of Urban and Regional Research* 32: 186-191.

Freeman, L. (2009). Neighbourhood Diversity, Metropolitan Segregation and Gentrification: What Are the Links in the US? *Urban Studies,* 46: 2079-2101. doi:10.1177/0042098009339426

Freeman L and Braconi F. (2004) Gentrification and Displacement: New York City in the 1990s. *Journal of the American Planning Association* 70: 39-52.

Frey WH. (1979) Central City White Flight - Racial and Non-Racial Causes. *American Sociological Review* 44: 425-448.

Hackworth J. (2002). Postrecession gentrification in New York City. *Urban Affairs Review* 37: 815-843. doi:10.1177/107874037006003

Hamnett, C. (2003). Gentrification and the Middle-Class Remaking of Inner London, 1961-2001. *Urban Studies* 40: 2401-2426. doi:10.1080/0042098032000136138

Harris DR. (1999) "Property Values Drop When Blacks Move in, Because...": Racial and Socioeconomic Determinants of Neighborhood Desirability. *American Sociological Review* 64: 461-479.

Hartig T, Johansson G and Kylin C. (2003) Residence in the Social Ecology of Stress and Restoration. *Journal of Social Issues* 59: 611-636.

Heylen K. (2013). The distributional impact of housing subsidies in Flanders. *International Journal of Housing Policy* 13: 45-65. doi:10.1080/14616718.2013.764660

Hochstenbach C, Musterd S and Teernstra A. (2015). Gentrification in Amsterdam: Assessing the Importance of Context. *Population Space and Place* 21: 754-770. doi:10.1002/psp.1854

Holcomb, HB and Beauregar d RA. (1981). *Revitalizing cities*. Washington (D.C.): Association of American Geographers.

Hox JJ. (2010) *Multilevel Analysis. Techniques and Applications. 2nd Edition.*, New York: Routledge.

Jamagne P, Lebrun L and Sajotte C. (2012) Vademecum Statistische Sectoren. Brussel: Statistics Belgium.

Kearns A and Mason P. (2013). Defining and measuring displacement: is relocation from restructured neighbourhoods always unwelcome and disruptive? *Housing Studies* 28: 177-204.

Kim TK, Horner MW and Marans RW. (2005) Life Cycle and Environmental Factors in Selecting Residential and Job Locations. *Housing Studies* 20: 457-473.

Kleinhans, R. (2009). Does Social Capital Affect Residents' Propensity to Move from Restructured Neighbourhoods? *Housing Studies* 24: 629-651.

Lees, L. (2003). Super-gentrification: The Case of Brooklyn Heights, New York City. *Urban Studies*, 40: 2487-2509. doi:10.1080/0042098032000136174

Lees L. (2008) Gentrification and Social Mixing: Towards an Inclusive Urban Renaissance? *Urban Studies* 45: 2449-2470.

Lees L, Slater T and Wyly E. (2008) *Gentrification*, New York: Taylor & Franics Group.

Livingston M, Bailey N and Kearns A. (2010) Neighbourhood Attachment in Deprived Areas: Evidence from the North of England. *Journal of Housing and the Built Environment* 25: 409-427.

Lu M. (1999) Do People Move when They Say They Will? Inconsistencies in Individual Migration Behavior. *Population and environment* 20: 467-488.

Luttmer EFP. (2005) Neighbors as Negatives: Relative Earnings and Well-Being. *The Quarterly Journal of Economics* 120: 963-1002.

Lyons M. (1996) Gentrification, Socioeconomic Change, and The Geography of Displacement. *Journal of Urban Affairs* 18: 39-62.

Marcuse P. (1986) Abandonment, Gentrification and Displacement: The Linkages in New York City. In: Smith NW, P. (ed) *Gentrification of the City*. London: Unwin Hyman, 153-177.

Martin GR. (2005) Narratives Great and Small: Neighbourhood Change, Place and Identity in Notting Hill. *International Journal of Urban and Regional Research* 29: 67-88.

McKinnish T, Walsh R and White TK. (2010). Who gentrifies low-income neighborhoods? *Journal of Urban Economics* 67: 180-193. doi:10.1016/j.jue.2009.08.003

Mele C. (1996). Globalization, Culture, and Neighborhood Change: Reinventing the Lower East Side of New York. *Urban Affairs Review* 32: 3-22. doi:10.1177/107808749603200101

Mele C. (2000). *Selling the Lower East Side. Culture, Real Estate, and Resistance in New York City* (Vol. 5). Minneapolis: University of Minnesota Press.

Owens A. (2012) Neighborhoods on the Rise: A Typology of Neighborhoods Experiencing Socioeconomic Ascent. *City & Community* 11: 345-369.

Permentier M, Bolt G and van Ham M. (2011) Determinants of Neighbourhood Satisfaction and Perception of Neighbourhood Reputation. *Urban Studies* 48: 977-996.

Permentier M, van Ham M and Bolt G. (2007) Behavioural Responses to Neighbourhood Reputations. *Journal of Housing and the Built Environment* 22: 199-213.

Phipps AG and Carter JE. (1984) An Individual-Level Analysis of the Stress-Resistance Model of Household Mobility. *Geographical Analysis* 16: 176-189.

Podagrosi A, Vojnovic I and Pigozzi B. (2011). The Diversity of Gentrification in Houston's Urban Renaissance: From Cleansing the Urban Poor to Supergentrification. *Environment and Planning A* 43: 1910-1929. doi:10.1068/a43526

Priemus H. (1986) Housing As a Social Adaptation Process: A Conceptual Scheme. *Environment and Behavior* 18: 31-52.

Shaw KS and Hagemans IW. (2015). 'Gentrification Without Displacement' and the Consequent Loss of Place: The Effects of Class Transition on Low-income Residents of Secure Housing in Gentrifying Areas. *International Journal of Urban and Regional Research* 39: 323-341. doi:10.1111/1468-2427.12164

Skifter Andersen H. (2008) Why Do Residents Want to Leave Deprived Neighbourhoods? The Importance of Residents' Subjective Evaluations of their Neighbourhood and Its Reputation. *Journal of Housing and the Built Environment* 23: 79-101.

Slater T. (2006) The Eviction of Critical Perspectives from Gentrification Research. *International Journal of Urban and Regional Research* 30: 737-757.

Smith N. (1996) *The New Urban Frontier: Gentrification and the Revanchist City*, London: Routledge.

Speare A. (1974) Residential Satisfaction as an Intervening Variable in Residential Mobility. *Demography* 11: 173-188.

Stad Gent (2010) Gent in cijfers: 2010. Leefbaarheidsmonitor, 3rd ed. [Data file] Gent: ABIS, Data-Analyse & GIS. Veldwerk en eerste analyses door MAS.

Stad Gent (2014) Gent in cijfers: 2014. Leefbaarheidsmonitor, 4th ed. [Data file] Gent: Strategie en Coördinatie, Data-Analyse & GIS. Veldwerk en eerste analyses door WES vzw.

Stad Gent (2016). Naar de stad of weg uit de stad?

Stouffer SA, Lumsdaine AA and Lumsdaine MH. (1949) *The American Soldier : Combat and Its Aftermath*, New York: Wiley.

Sullivan DM. (2007). Reassessing gentrification - Measuring residents' opinions using survey data. *Urban Affairs Review*, 42: 583-592. doi:10.1177/1078087406295828

Sullivan DM and Shaw SC. (2011). Retail Gentrification and Race: The Case of Alberta Street in Portland, Oregon. *Urban Affairs Review*, 47: 413-432. doi:doi:10.1177/1078087410393472

Tissot S. (2011) Of Dogs and Men: The Making of Spatial Boundaries in a Gentrifying Neighborhood. *City & Community* 10: 265-284.

Uitermark J and Loopmans M. (2013). Urban renewal without displacement? Belgium's 'housing contract experiment' and the risks of gentrification. *Journal of Housing and the Built Environment* 28: 157-166.

Valli, C. (2016). A Sense of Displacement: Long-time Residents' Feelings of Displacement in Gentrifying Bushwick, New York. *International Journal of Urban and Regional Research* 39: 1191-1208. doi:10.1111/1468-2427.12340

Van Criekingen M. (2008). Towards a Geography of Displacement. Moving out of Brussels' Gentrifying Neighbourhoods. *Journal of Housing and the Built Environment* 23: 199-213.

Van Criekingen M. (2009). Moving In/Out of Brussels' Historical Core in the Early 2000s: Migration and the Effects of Gentrification. *Urban Studies* 46: 825-848.

Van Criekingen M. and Decroly JM. (2003). Revisiting the diversity of gentrification: Neighbourhood renewal processes in Brussels and Montreal. *Urban Studies* 40: 2451-2468.

van Ham M and Clark WAV. (2009) Neighbourhood Mobility in Context: Household Moves and Changing Neighbourhoods in the Netherlands. *Environment and Planning A* 41: 1442-1459.

van Kempen R and Bolt G. (2009) Social Cohesion, Social Mix, and Urban Policies in the Netherlands. *Journal of Housing and the Built Environment* 24: 457-475.

van Weesep J. (1994). Gentrification as a research frontier. *Progress in Human Geography* 18: 74-83. doi:10.1177/030913259401800107

van Weesep J and Musterd S. (1991). *Urban Housing for the Better-Off: Gentrification in Europe*. Utrecht: Bureau stedelijke netwerken.

Vigdor JL. (2001) Does Gentrification Harm the Poor? *Brookings-Wharton Conference on Urban Affairs.*

Walks RA and Maaranen R. (2008). *Neighbourhood Gentrification and upgrading in Montreal, Toronto and Vancouver*.

Zukin S, Taujillo V, Frase P, et al. (2009) New Retail Capital and Neighborhood Change: Boutiques and Gentrification in New York City. *City & Community* 8: 47-64.

Appendix A

[TABLE 7 AROUND HERE]

Table 1: The questions used to operationalize the dependent variable.

Question/Answer:	Dependent variable classification:
Do you think you will move the coming two years?	
No	Does not have moving propensities
Possibly	See question 2
I would want to, but cannot find a home that satisfies the needs of our family	See question 2
I would want to, but do not possess the necessary financial means	See question 2
Certainly	See Question 2
I already found a new home	See Question 2
What is the most important reason why you would move?	
Personal circumstances	Does not have moving propensities
Work-related	Does not have moving propensities
Dissatisfaction with the current home	Has moving propensities based on dissatisfaction with the home.
Dissatisfaction with the current neighbourhood	Has moving propensities based on dissatisfaction with the neighbourhood.
I want to leave the city*	Does not have moving propensities
Other	Does not have moving propensities
* This option was added for the last survey. As it was not included in the former, people who chose this option are coded as answering “Other”.	

Table 2: The deprivation scores of the included (deprived) neighbourhoods.

	2006–2008				2010–2012			
Neighbourhoods:	Non-improving		Improving		Non-improving		Improving	
Amount	25		26		33		17	
	2006	2008	2006	2008	2010	2012	2010	2012
Index of Deprivation								
Mean	1.54	1.60	1.63	1.47	1.51	1.59	1.50	1.36
Median	1.51	1.51	1.56	1.47	1.46	1.53	1.33	1.25
Minimum	1.08	1.11	1.15	0.65	1.14	1.14	1.11	0.84
Maximum	2.29	2.62	2.56	2.03	2.00	2.15	2.51	2.19
Difference between	2008 and 2006		2008 and 2006		2012 and 2010		2012 and 2010	
Mean	0.066		–0.154		0.078		–0.132	
Median	0.037		–0.076		0.070		–0.075	
Minimum	–0.023		–1.042		–0.012		–0.481	
Maximum	0.330		–0.027		0.214		–0.032	

Note: A higher score on the Index of Deprivation means that a neighbourhood is more deprived. Socioeconomically improving and non-improving neighbourhoods are both substantially deprived. Non-improving neighbourhoods have an increasing or stable deprivation index, socioeconomically improving ones a declining index.

Table 3: Descriptive analysis.

		Dissatisfaction with the neighbourhood		Dissatisfaction with the home	
	Neighbourhood:	Non-improving	Improving	Non-improving	Improving
Variable	Range	N or Average (SD)		N or Average (SD)	
Dependent					
Propensity to move	0–1				
No propensity to move		437	379	437	379
Propensity to move		53	52	44	66
Independent					
Educational attainment	0-1				
Lower or middle-educated		284	266	275	276
Higher-educated		206	165	206	169
Homeownership	1-0				
Homeowner		326	331	312	334
Other		164	100	169	111
Presence of young children	0-1				
No young children		422	362	403	371
Young children		68	69	78	74
Age	10-80	45.77 (17.92)	43.08 (17.55)	44.75 (17.79)	41.99 (17.29)
Neighborhood characteristics					
In 2008	0–1				
Socioeconomically improving		26		(50.98%)	
Non-improving		25		(49.02%)	
In 2012	0–1				
Socioeconomically improving		17		(34.00%)	
Non-improving		33		(66.00%)	

Table 4: Bivariate analyses.

	Moving propensities based on dissatisfaction with the neighbourhood			Moving propensities based on dissatisfaction with the home		
	No	Yes	Correlation	No	Yes	Correlation
Educational attainment			r:-.071*			r: -.045
Lower or middle-educated	58.5%	69.6%		58.7%	65.7%	
Higher-educated	41.5%	30.4%		41.3%	34.3%	
Homeownership			r:-.082*			r: -.172***
Homeowner	72.6%	60.8%		72.6%	47.6%	
Other	27.4%	39.2%		27.4%	52.4%	
Presence of young children			r:-.002			r:.117***
No young children	85.1%	85.3%		85.1%	71.4%	
Young children	14.9%	14.7%		14.9%	28.6%	
Age (Mean)	44.76	45.67	r:.0157	44.72	39.66	r: -.089**

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table 5: Results of multi-level analyses with the propensity to move because of dissatisfaction with the neighbourhood as the dependent variable

Variables	Null model				Model 1: Control variables				Model 2: Education & socio-economic improvements			
	Exp(B)	95% C.I.			Exp(B)	95% C.I.			Exp(B)	95% C.I.		
Intercept	0.111	0.079	0.158	***	0.209	0.126	0.347	***	0.241	0.137	0.423	***
Higher educated [a]									0.655	0.404	1.063	°
Socioeconomic improvements [b]									1.096	0.665	1.807	
Interaction: socioeconomic improvements & Higher education												
Young children [c]					0.973	0.515	1.838		0.969	0.513	1.830	
Homeowners [d]					0.587	0.365	0.943	*	0.615	0.381	0.992	*
Age					1.041	0.813	1.334		1.024	0.799	1.313	**
Age²					0.748	0.592	0.944	*	0.723	0.572	0.915	**
Neighbourhood Variance	0.649 (0.809)				0.645 (0.803)				0.547 (0.740)			

° p<0.1; * p<0.05; ** p<0.01; *** p<0.001

[a] The reference category is formed by lower or middle educated respondents.

[b] The reference category is formed by non-improving, deprived neighbourhoods.

[c] The reference category is formed by respondents who do not have young children.

[d] The reference category is formed by renters.

Age and age squared are standardized.

Note: socioeconomic improvements in deprived neighbourhoods are not related to moving propensities based on dissatisfaction with the neighbourhood.

Table 6: Results of multi-level analyses with the propensity to move because of dissatisfaction with the home as the dependent variable

Variables	Null model				Model 1: Control variables				Model 2: Education & socio-economic improvements				Model 3: Interaction			
	Exp(B)	95% C.I.			Exp(B)	95% C.I.			Exp(B)	95% C.I.			Exp(B)	95% C.I.		
Intercept	0.123	0.096	0.159	***	0.344	0.232	0.510	***	0.263	0.163	0.426	***	0.306	0.192	0.485	***
Higher educated [a]									0.767	0.486	1.209		0.502	0.237	1.062	°
Socioeconomic improvements [b]									2.181	1.364	3.486	**	1.705	0.966	3.010	°
Interaction: socioeconomic improvements & higher education													1.991	0.782	5.070	
Young children [c]					2.203	1.312	3.699	**	2.354	1.392	3.981	**	2.299	1.357	3.896	**
Homeowners [d]					0.261	0.168	0.407	***	0.239	0.151	0.379	***	0.243	0.153	0.385	***
Age					0.647	0.485	0.863	**	0.667	0.497	0.894	**	0.668	0.498	0.896	**
Age²					0.615	0.473	0.800	***	0.606	0.465	0.791	***	0.604	0.463	0.788	***
Neighbourhood Variance	0.065 (0.255)				0.012 (0.109)				0.011 (0.103)				0.006 (0.077)			

° p<0.1; * p<0.05; ** p<0.01; *** p<0.001

[a] The reference category is formed by lower or middle educated respondents.

[b] The reference category is formed by non-improving, deprived neighbourhoods.

[c] The reference category is formed by respondents who do not have young children.

[d] The reference category is formed by renters.

Age and age squared are standardized.

Note: socioeconomic improvements in deprived neighbourhoods are related to higher moving propensities for both lower and educated respondents.

Table 7: The median taxable income and percentage unemployed inhabitants of low-income neighbourhoods and their evolution.

	2006–2008						2010–2012					
Neighbourhoods:	Non-improving		Improving		City		Non-improving		Improving		City	
Amount	25		26				33		17			
	2006	2008	2006	2008	2006	2008	2010	2012	2010	2012	2010	2012
Median taxable income												
Mean	€15980	€17170	€15980	€17900	€20600	€21960	€17860	€19340	€18620	€20290	€22710	€24850
Median	€16240	€17420	€16170	€17830	€20520	€21940	€17900	€19000	€18430	€20680	€22840	€24910
Minimum	€11710	€12390	€12610	€13630	€11710	€12390	€14420	€15510	€13810	€15150	€12810	€15150
Maximum	€19990	€21380	€23100	€25380	€33930	€31520	€22810	€25400	€22360	€25210	€35330	€39070
Difference between	2008 and 2006						2012 and 2010					
Mean		€1263		€1927		€1351		€1481		€1674		€2142
Median		€1189		€1889		€1482		€1513		€1478		€1845
Minimum		-€138		€912		-€4193		€569		€195		-€1057
Maximum		€2718		€4550		€5449		€2596		€3044		€9926
% unemployed												
Mean	13.65%	10.90%	15.09%	9.73%	7.77%	5.74%	12.24%	11.93%	12.34%	9.39%	7.05%	6.35%
Median	13.80%	10.93%	14.50%	9.80%	6.05%	4.50%	11.80%	11.40%	11.20%	8.20%	5.95%	5.50%
Minimum	8.30%	6.70%	8.10%	0.90%	0.00%	0.00%	8.20%	7.80%	6.90%	3.20%	0.00%	0.00%
Maximum	21.90%	19.90%	27.10%	14.50%	27.10%	19.90%	18.00%	18.00%	23.80%	17.40%	23.80%	23.40%
Difference between	2008 and 2006						2012 and 2010					
Mean		-2.80%		-5.35%		-2.03%		-0.31%		-2.95%		-0.70%
Median		-2.72%		-5.10%		-1.60%		-0.40%		-2.50%		-0.45%
Minimum		-4.40%		-17.80%		-17.80%		-1.40%		-7.10%		-12.00%
Maximum		-0.90%		-2.70%		2.60%		1.30%		-0.80%		6.30%

Figure 1: the deprived and gentrified neighbourhoods of Ghent